

M. G. Science Institute, Ahmedabad

Autonomous | Affiliated to Gujarat University, Ahmedabad

(Managed by The Ahmedabad Education Society)

Department of English

Bachelor of Science (Hons.)

B.Sc. (Hons.)

(Effective from Academic Year 2024-25)

Semester-I Indian Knowledge System (IKS-117)



Objectives of the Course

- This course is designed to understand and enhance the holistic understanding of Indian Knowledge System.
- This course provides the basic understanding of the rich Indian knowledge system and its traditions.
- The course will introduce to the various ancient Indian Schools and its relevance in contemporary period with the great achievements of IKS to the world.
- It helps in understanding and analyzing the Ancient Indian knowledge system.

Outcomes of the Course

Learners will be able to...

- Understand the contribution of Indian minds in various fields
- Learn about the leading Indian inventors and thinkers in various disciplines
- Develop a positive attitude towards Indian traditions and practices
- Increase subject-awareness and self-esteem
- Develop a comprehensive understanding of how all knowledge is ultimately intertwined

Semester-I

Course Title: Indian Knowledge System

Course Code: IKS-117

Credits: 02

Programme	Teaching Hours	CIE	ESE	Total Marks
B.Sc.	40	25	25	50

Unit	Topic
1	Introduction to IKS <ul style="list-style-type: none">○ Introduction to IKS & Its importance<ul style="list-style-type: none">▪ Introduction & importance of IKS▪ Various IKS Systems○ Shashtra – Foundational Literature of Bharatvarsha<ul style="list-style-type: none">▪ What is Shashtra?▪ Importance of Shashtra▪ Classification of Shashtra – Vaidic & A vaidic (with examples of imp. Literature)

	<ul style="list-style-type: none"> ○ Base of IKS proliferation <ul style="list-style-type: none"> ▪ Bhartiya Education System and its philosophy ▪ History of BES from Ancient to Modern ▪ Domains of Education: Gurukul, Pathshala, Vidyalay, Vishva vidyalay
2	<p>Contribution of IKS to the World</p> <ul style="list-style-type: none"> ▪ Mathematics&Astronomy ▪ NumberSystem ▪ Algebra&Arithmetic ▪ Geometry ▪ Trigonometry ▪ PlanetarySystem ▪ SpeedofLight ▪ Eclipse ○ Lifesciences <ul style="list-style-type: none"> ▪ Physics ▪ Chemistry ▪ Botany ○ Metal Technology <ul style="list-style-type: none"> ▪ Mining Techniques ▪ Types of Metals
	<ul style="list-style-type: none"> ○ Town planning & Temple Architecture <ul style="list-style-type: none"> ▪ Indigenous tools & technologies for town planning & Temple Architecture ▪ Lothal, MohanJo Daro, Dholavira ▪ Angkorvat, Lepakshi Temple, Jagannath Puri Temple, Thanjavur Temple, Modhera and Konark Sun Temple, Hampi Temple Etc.

	<ul style="list-style-type: none"> ○ Ayurveda <ul style="list-style-type: none"> ▪ Introduction of Ayurveda- Definition, Branches of Ayurveda, Books and Pioneers ▪ Indic Medical Science Achievement: Tools &Technology ○ Art &Traditions <ul style="list-style-type: none"> ▪ History and Origin ▪ Science behind our traditions and rituals
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Reference

Books:

- **Introduction to Indian Knowledge System**-Concept and Application by B.Mahadevan, Vinayak Rajat Bhat, Nagendra Pavan R.N.
- R.M.Pujari, Pradeep Kolhe,N.R.Kumar, '**Pride of India: A Glimpse into India's Scientific Heritage**',Sanskrita Bharati Publication.
- '**Indian Contribution to science**', compiled by Vijnana Bharati.
- '**Knowledge traditions and Practices of India**', Kapil Kapoor, Michel Danino, CBSE, India.

ReferenceBooks:

- Dr. Subhash Kak , Computation in Ancient India,Mount, Meru Publishing (2016)
- Dharampal, Indian Science and Technology in the Eighteenth Century, Academy of Gandhian Studies, Hyderabad, 1971, republ. Other India Bookstore, Goa, 2000
- Robert Kanigel, The Man Who Knew Infinity: A Life of the Genius Ramanujan, Abacus,London, 1999
- Alok Kumar, Sciences of the Ancient Hindus: Unlocking Nature in the Pursuit of Salvation, CreateSpace Independent Publishing, 2014
- B.V. Subbarayappa, Science in India: A Historical Perspective, Rupa, New Delhi, 2013
- S. Balachandra Rao, Indian Mathematics and Astronomy: Some Landmarks, Jnana Deep Publications, Bangalore, 3rd ed., 2004

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